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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/620,266	07/14/2003	Wei-Gc Chen	3382-65137	8740

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EXAMINER

ABEBE, DANIEL DEMELASH

ART UNIT	PAPER NUMBER
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2626

MAIL DATE	DELIVERY MODE
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06/19/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/620,266

Applicant(s)

CHEN ET AL.

Examiner

Daniel D. Abebe

Art Unit

2626

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1,2,9,10,16 and 17 is/are allowed.
- 6) ☒ Claim(s) 3-8,11-15 and 18-22 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date ____. | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 3-8, 11-15 and 18-22 are rejected under 35 U.S.C. 102(e) as being anticipated by Hardwick (6,675,148).

As to claim 5, Hardwick teaches in a lossless audio coder a method for encoding an audio signal, comprising the steps of:

For a frame of audio signal generating a prediction residue (error samples)' and

Golomb encoding the residue (abstract)

According to Hardwick

One technique for lossless compression is to divide the audio signal into segments or frames. Then, for each frame, to compute a low-order linear predictor that is quantized and stored for that frame. This predictor then may be applied to all the audio samples in the frame, and the prediction residuals (i.e., the error after prediction) **may be coded using some form of entropy-type coder, such as, for example, a Huffman, Golomb, Rice, run-length, or arithmetic coder (Col.2, lines 50-65).**

As to claims 6-7, Hardwick doesn't restrict the divisor value in the coding.

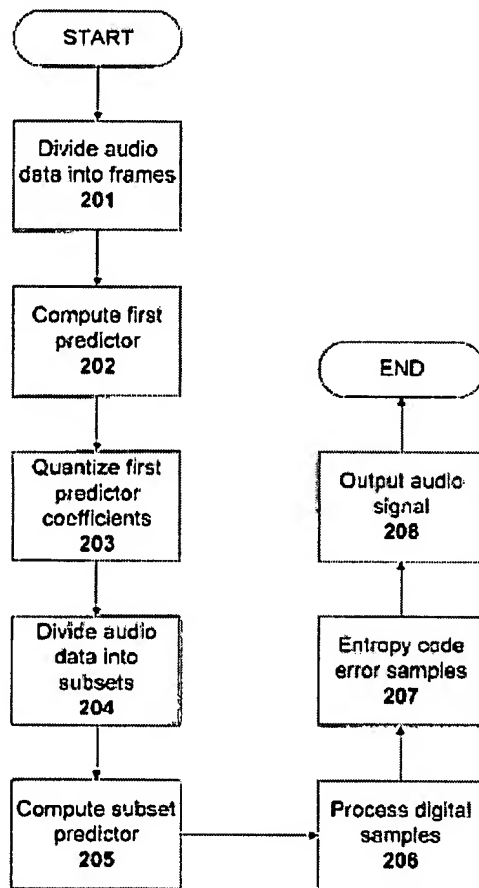


FIG. 2

As to claim 8, Hardwick teaches a decoder for reconstructing the encoded audio signal (Fig.3).

As to claim 3, Hardwick teaches a multi channel losseless audio encoding using adaptive predictor, the method comprising

Processing a frame of samples from multiple channels where

The audio samples may include first audio sample for a first audio channel and second audio samples for a second audio channel. And where the audio data may be

reconstructed by reconstructing the first audio data, and then reconstructing the second audio data using the first audio data.

Including a step where error samples may be produced by computing one or more predictors for a frame and using the predictors to produce errors samples from the digital samples. The digital samples also may include first channel samples from a first channel of the audio source and second channel samples from a second channel of the audio source. The digital samples may be processed to produce error samples. The processing may include predicting the second channel samples from the first channels samples.

As to claim 4, Hardwick teaches where Prediction may be used to remove redundancy from the signal prior to coding in a lossless or a lossy system for coding audio signals. In a lossy speech coding application, modest (e.g., 8-14th) order adaptive linear predictors (filters) may be applied to each frame of speech (for example, 15-30 ms per frame) and predictor coefficients or weights (filter coefficients) may be computed using the autocorrelation or covariance methods, inherently suggesting the use of the conventional least mean square filter (Col.3, lines 16-30).

Claims 11-15 and 18-22 are analogous to the claims above and are rejected for the foregoing reasons.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 6-7 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. the specification doesn't adequately describe the divisor as claimed.

Allowable Subject Matter

Claims 1-2, 9-10 and 16-17 are allowed.

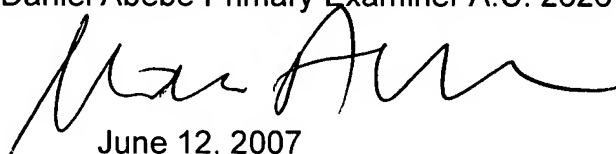
The following is a statement of reasons for the indication of allowable subject matter: the claims are allowed because Hardwick doesn't teach the step of detecting the current sample location and varying an adaptation rate as recited in the claims.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Daniel D. Abebe whose telephone number is 571-272-7615. The examiner can normally be reached on monday-friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Hudspeth can be reached on 571-272-7843. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Daniel Abebe Primary Examiner A.U. 2626

A handwritten signature in black ink, appearing to read 'Daniel Abebe', is written over the printed name and date.

June 12, 2007